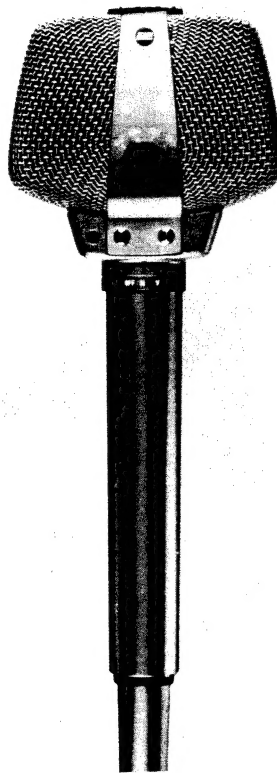


# ECM-990F

*E Model  
AEP Model  
US Model*



## ONE POINT STEREO ELECTRET CONDENSER MICROPHONE

### SPECIFICATIONS

#### GENERAL

- Type:** One-point stereo electret condenser microphone (with back-electret condenser capsule)
- FET:** Sony junction FET
- Battery:** Penlight battery size AA, (IEC Designation R6)  
Sony SUM-3S (manganese)  
EVEREDAY No. 1015 (manganese)  
No. E-91 (alkaline)  
No. E-9 (mercury)
- Microphone Cable:** 3.9 mm dia. 3 m  $\frac{5}{32}$ " dia. 9 ft.  
Single-conductor shielded for each channel
- Dimensions:** Screen (88 x 77.5 x 43) x Case 25 mm dia.  
Total Length 210 (mm)  
Screen (3  $\frac{1}{2}$  x 3  $\frac{1}{16}$  x 1  $\frac{1}{16}$ ) x Case 1 inch dia.  
Total Length 8  $\frac{1}{4}$  (inch)
- Weight:** 320 g 11.3 oz with battery

#### PERFORMANCES

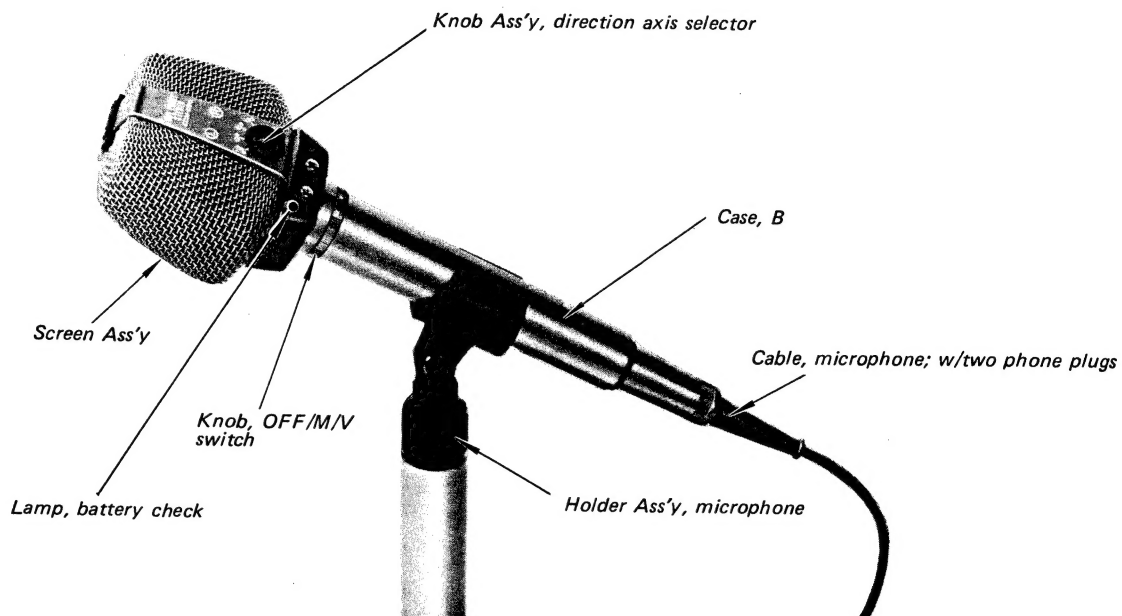
- Frequency Response:** 40–16,000 Hz
- Directivity:** Uni-directional per each capsule
- Output Impedance:** 200 ohms  $\pm 20\%$ , unbalanced  
(deviation  $\pm 3$  dB)
- Output Level:** Effective output level;  $-57$  dBm  
(0 dB = 1 mW/10  $\mu$ bar at 1,000 Hz)  
Open circuit voltage; 0.13 mV/ $\mu$ bar  
at 1,000 Hz  
Recommended load impedance is more than 3 k ohms.
- Power Requirements:** Normal operating voltage;  
1.5 V DC  
Minimum operating voltage;  
1.2 V DC  
Current drain; Less than 0.3 mA  
Battery life; Approx. 4,000 hours  
with Sony SUM-3S,  
EVEREDAY 1015,  
Approx. 4,000 hours  
with EVEREDAY E-91

- Noise Level:** Signal-to-noise ratio;  
More than 44 dB  
(1,000 Hz, 1  $\mu$ bar)
- Inherent noise; Less than 30 dB SPL  
(0 dB =  $2 \times 10^{-4}$   $\mu$ bar)
- Wind noise \*1; Less than 50 dB SPL
- Induction noise from external magnetic field \*2; Less than 5 dB SPL/m gauss
- \*1 Wind noise is the value measured by applying a wind velocity of 6.6 ft/second from all directions to the microphone. The mean value is taken and converted to the equivalent input sound level.  
0 dB =  $2 \times 10^{-4}$   $\mu$ bar.
- \*2 The external magnetic field induction noise is measured with the microphone placed in the alternating magnetic field of 50 Hz, 1 m gauss. The maximum noise value is taken and then converted to the equivalent input sound level.  
0 dB =  $2 \times 10^{-4}$   $\mu$ bar
- Maximum Sound Pressure Input Level:** Approx. 126 dB SPL  
(at 1,000 Hz 1% distortion)
- Environmental Temperatures:**  $-4^{\circ}$  to  $140^{\circ}$  F ( $-20^{\circ}$  to  $60^{\circ}$  C) for storage  
 $32^{\circ}$  to  $140^{\circ}$  F ( $0^{\circ}$  to  $60^{\circ}$  C) for operation

# SONY®

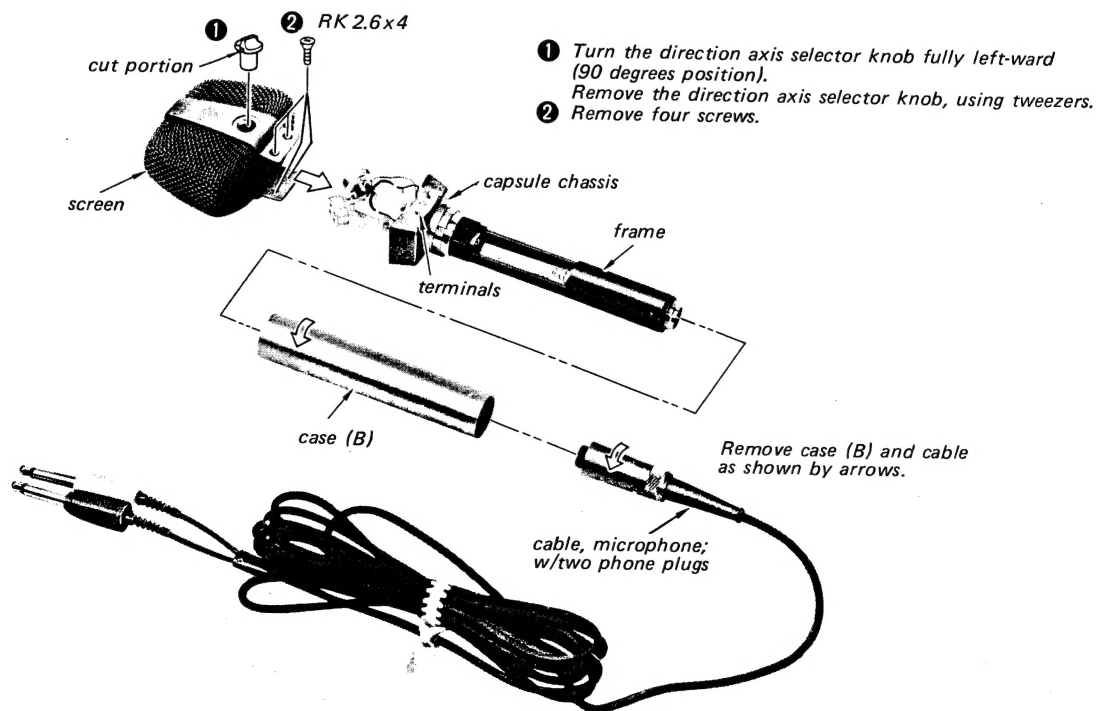
## SERVICE MANUAL

## 1. EXTERNAL VIEW



## 2. DISASSEMBLY

Remove the parts in the numerical order.



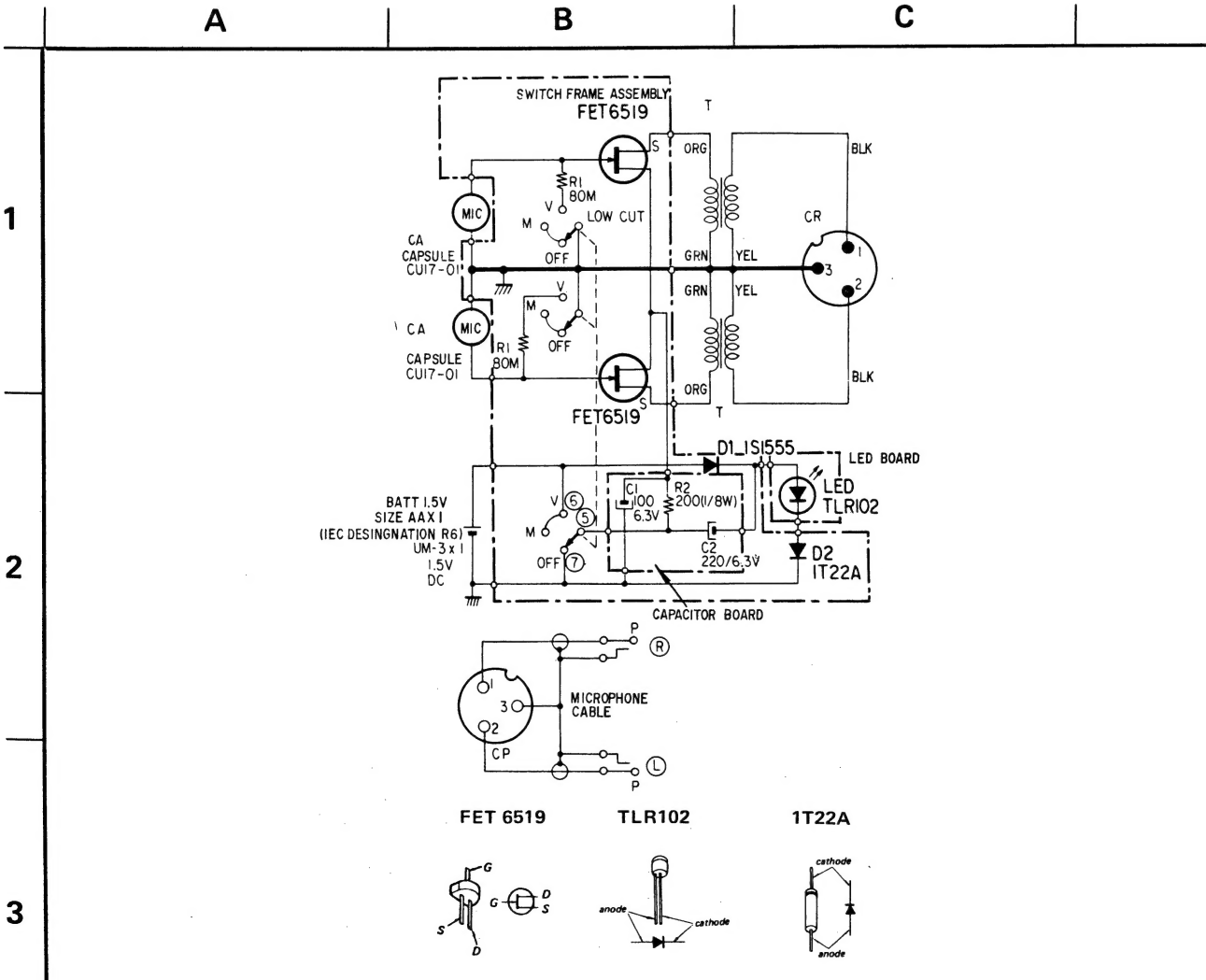
### 3. TROUBLESHOOTING

CONDITION	PRELIMINARY CHECK	FINAL REMEDY
No sound.	1. Opposite insertion of battery. 2. Low voltage. 3. Dirty terminal of battery.	Replace switch frame ass'y.
Low level sound. (Low sensitivity)	1. Low voltage. 2. Dirty terminal of battery.	Replace switch frame ass'y. Replace microphone capsule.
Noisy sound. Intermittent sound.	1. Broken lead wires transformer. 2. Broken wires of cord or plug.	Replace switch frame ass'y.
Only noise can be heard.	1. Low voltage. 2. Dirty terminal of battery.	Replace switch frame ass'y.
OFF/M/V switch is not effective.		Replace switch frame ass'y. Replace microphone capsule.

#### CAUTION

The circuit board has been carefully adjusted at the factory. If some trouble occurs on it, replace the circuit board. The parts on the circuit board are not individually available.

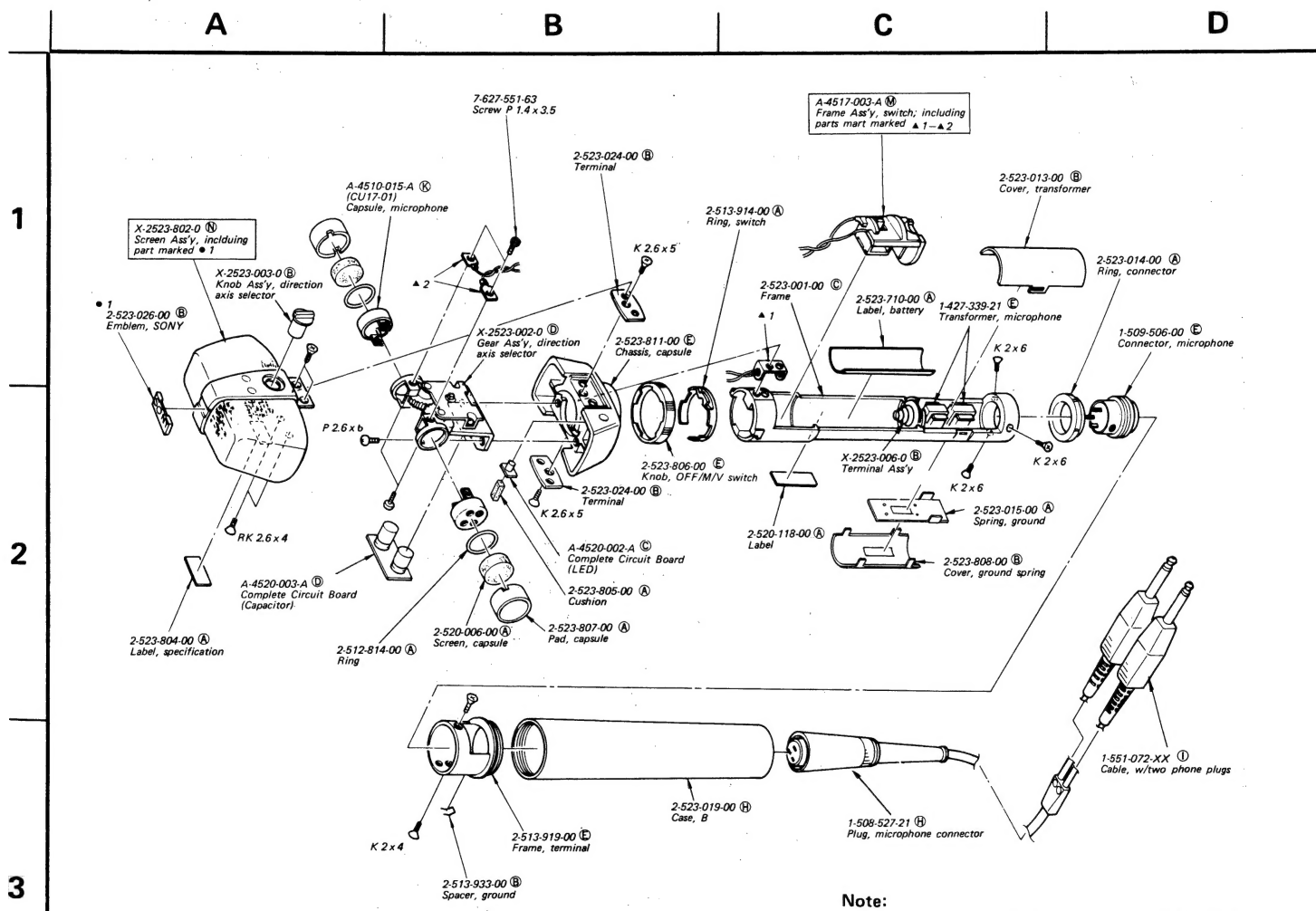
### 4. SCHEMATIC DIAGRAM



## 5. ACCESSORIES & PACKING MATERIALS

<u>Part No.</u>	<u>Description</u>
A-4581-009-A	Holder Ass'y, microphone (E model)
A-4581-009-B	(E) Holder Ass'y, microphone (AEP model)
A-4581-009-C	Holder Ass'y, microphone (US model)
1-528-027-11	(B) Battery
2-100-951-00	(B) Adaptor, stand screw (AEP model)
2-100-952-00	Adaptor, stand screw (E model, US model)
2-523-070-00	(H) Case, carrying
2-523-073-00	(A) Sheet, protector
2-523-802-00	(C) Carton
2-599-086-11	(B) Manual, instruction
3-701-620-00	(A) Bag, plastic
3-793-557-11	(A) Leaflet, battery (AEP model)

## 6. EXPLODED VIEW



### Note:

- All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head
- Circled letters (A to Z) are applicable to European models only.

Sony Corporation

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